

NUMERICAL CONTROL UNIT

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ABSTRACT OF THE DISCLOSURE

10 A numerical control unit having a load monitoring
function for monitoring a load on a tool drive source
during a machining operation. The numerical control unit
includes a load monitoring section for monitoring the
load on an electric motor; a wear recognizing section for
recognizing the current extent of tool wear; a storing
section for storing a plurality of preset limit load
15 values corresponding individually to predetermined
various extents of tool wear; a calculating section for
calculating the current limit load value corresponding to
the current extent of tool wear recognized in the wear
recognizing section, based on the plurality of preset
20 limit load values stored in the storing section; and a
comparing section for comparing the load on the electric
motor, monitored in the load monitoring section, to the
current limit load value calculated in the calculating
section, and for judging on the abnormality of the load.
25 The wear recognizing section recognizes the current
extent of tool wear by using one parameter selected from
a group consisting of the number of times of use of a
tool, the duration of cutting by a tool, the distance of
cutting by a tool and the number of times of execution of
30 machining program. The load monitoring section monitors
at least one of maximum value, average value and minimum
value of the load in a certain procedure of a machining
program.